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Elearning Promoting Plagiarism Or Honesty?

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ELEARNING – PROMOTING PLAGIARISM OR HONESTY?

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Abstract

eLearning encourages students to avail themselves of the myriad of resources available via the World Wide Web. The ease and speed of access to material needs to be counterbalanced by appropriate assessment by the student of the credibility of the source, thoughtful evaluation and analysis of the content and the appropriate acknowledgement of the owner of the original ideas. We believe these skills can be taught, and assessed, via eLearning. We also believe that changing behaviours relating to plagiarism and honesty will rely on changing cultural attitudes. To understand prevailing attitudes to plagiarism at our institution, towards improving understanding and changing behaviours, we conducted a survey with academics and students. This paper explores these attitudes to plagiarism through grounded theory, and presents results from a first trial with our Online Honesty Tool.

Keywords: Plagiarism, Academic Honesty, eLearning, Survey, Tool.

1 INTRODUCTION

There is little denying the World Wide Web (WWW) has greatly enabled eLearning which in turn has transformed education, providing students with flexible delivery and relatively effortless access to learning material and activities. eLearning may be defined as material delivered via electronic networks or multimedia platforms; in practice this usually means the provision of course material through the use of Learning Management Systems (LMSs) such as Blackboard™, Moodle™, LAMS™ and Click2Learn™. However the easy access to content afforded by eLearning platforms has enabled the practice of cheating in its various forms including plagiarism. Even more problematic from a plagiarism point of view, is the enormous volume of publically accessible and searchable pages on the WWW which make it possible to find any information requested from a huge database of resources including books, journals and magazines that are offered online. In general, the use of electronic forms of information has made them far more accessible in both a positive and negative sense, for copying is now far easier with ‘cutting and pasting’ and the use of powerful search engines such as Google™ has meant that finding just the right words becomes easier than ever. Internet-enabled plagiarism is defined as internet plagiarism, cyber-plagiarism or e-cheating.

Academic Honesty is a core value for universities (McCabe, Trevino and Butterfield, 2001) and is associated with students having to complete their education with integrity and honesty by taking credit for the work they submit as part of any coursework required. The reason why the notion of academic honesty is a matter taken seriously within the academic community, is that students should be assessed in terms of their ideas and contributions in turn helping them to develop honest behaviour. Additionally, any dishonest behaviour by some students makes it unfair for others that follow the rules and procedures which in turn lead to reduced motivation to work harder and not cheat.

Numerous surveys confirm that the WWW has increased the cases of plagiarism all around the world (e.g. Flint and Clegg, 2005; Maurer, Kappe and Zaka, 2006). From a survey conducted at Northumbria University in 2002 it was found that 40% of students and 35% of the academic staff attributed plagiarism to the ease with which material can be copied from the Internet (Dordoy, 2002). Similar findings were also revealed from a survey of North American students reported by McCabe (2003).

Despite the rise in plagiarism enabled by the WWW, we also believe that this problem can be addressed via eLearning about plagiarism; turning part of the problem into part of the solution. In sections 2 and 3 we present our two pronged approach, undertaken by different groups of researchers, 1) starting with attitudes of academics and students to plagiarism and an understanding of what (de)motivates students to engage in plagiarism (Study 1), and 2) determine the effectiveness of educating students about plagiarism via an online tool (Study 2). Section 4 draws together conclusions for the two studies and our future work in this area.

2 STUDY ONE: ATTITUDES AND REASONS FOR PLAGIARIM

As a preliminary study to frame our scholarship on plagiarism we adopted an interpretive epistemology using grounded theory on the hermeneutic unit of eLearning. Many definitions of eLearning exist, but relatively little has been explored on this topic through a grounded theoretical ‘lens’. Very briefly, research epistemologies are generally either *Positivist* (typical of the physical, biological and ‘hard’ social sciences), *Interpretivist* (characteristic of the ‘soft’ social sciences and humanities), *Critical (Social) Research* (representative of the ‘activist’ disciplines: feminist, gay and indigenous research providing examples) (Neuman, 1997), or adopt a *Design Science* approach characterising disciplines such as engineering and computer science (Fettke, 2008). The first approach seeks to objectively study a physical object or phenomenon and mandates replication; interpretive research does not claim to be replicable, and admits subjectivity is acceptable in research as the human experience or interpretation is central to the research process; Critical research aims to force change as a result of the research conducted (Neuman, 1997); Finally design science is focused on the creation of

a prototype (Fettke, 2008). There is some legitimacy in combining at least the first three of these approaches (Jick; 1979; Stenmark, 2000-2001), although the practice is not commonplace.

One key strength of Grounded Theory (GT) is that it can be used to uncover themes arising in the literature on a given topic or hermeneutic unit (initially eLearning), that would otherwise not be so visible. The underlying themes we may label 'codes'. The '*groundedness*' of these codes, that is to say the occurrence of the codes in the literature tells us how important a particular theme is in the literature. We then construct a network map whereby codes are subjectively joined to one another. The number of times any given code may be joined with another is referred to as the '*density*' of the code. The combination of the code groundedness with its density permits us as researchers to gain a more complete understanding of a topic which in turn may inform further interpretivist or positivist research approaches. A discussion of the results of our eLearning hermeneutic unit have been discussed elsewhere (Busch et al., 2010); we suffice only to say that we found eLearning to be *web-based* (groundedness 9, network density 3) and that *technology* (10, 3) was important. Remember the groundedness refers to instance of the code being 'discovered' in the literature, whilst the density refers to importance of a code with regard to its relationship to another code. Not surprisingly 'technology' plays a substantial role in eLearning, although it is not one of the more connected codes. Another important code or theme is that of *Learning Management Systems* (8, 7) which clearly comprised a pivotal part of *eLearning* (12, 5), and that *Blackboard™*, *Saba™*, *Moodle™*, *Click2learn™* and *LAMS™* were examples of such packages. Other themes to arise from our eLearning hermeneutic unit were that *replacing face to face teaching* (7, 2) was also of relevance and *student participation* (10, 3) in the eLearning process was significant.

2.1 Understanding Plagiarism

From the above hermeneutic unit it was evident that Web-based technology played an important role in eLearning. From the literature (e.g. Dordoy, 2002; Flint and Clegg, 2005; Maurer, Kappe and Zaka, 2006; McCabe, 2003) it is also evident that web-based technology is a factor affecting the increase in plagiarism. As plagiarism is a behaviour, rather than focus on the literature we sought to understand plagiarism by using Grounded Theory to uncover the themes in the attitudes of our students and teachers. In 2010 we conducted a study which asked students and staff their perceptions of cheating/plagiarism or more formally: 'academic honesty'. The questionnaire used at Macquarie University was a slight modification of the one in use at Rutgers University,¹ though with sensitivity to Australian English. One survey was addressed to students (approximately 7K, 4.5K from the Faculty of Science and half from the Department of Economics in the Faculty of Business and Economics) and another to staff (approximately 200) at Macquarie University with regard to their respective understanding and opinions of these academic honesty policies. The number of student respondents was n=934 with the number of staff respondents totalling n=132. Questions asked both staff and students separately how they would rate the penalties in place; how they learned about the policies; how frequently did they think cheating occurred on campus; whether they reported peers for cheating; what type of cheating they may have engaged in as well as asking for biographical parameters, to name but the main question types. The focus of this paper is *not* on the quantitative results of these surveys, rather the qualitative feedback that was gained from both questionnaires.

Grounded theory was again applied, this time with a hermeneutic unit of *Plagiarism*. The two questionnaires mentioned above, one each to staff and students, included 29,491 words of qualitative feedback. The feedback asked *academics* 1) for their source of information regarding plagiarism; 2) whether they ignore academic dishonesty; 3) their reaction to such dishonesty; 4) how they safeguard

¹ <http://acad-integrity.rutgers.edu/rutgers.asp> (accessed 18/2/2011).

against cheating; 5) if and why they are dissatisfied with reported incidents of academic dishonesty; 6) what their role is in promoting academic integrity and 7) open commentary. *Students* provided qualitative feedback on 8) suggesting changes to the university integrity policy and 9) general open commentary on their experiences. The result of the qualitative analysis may be seen in Appendix A where a network map has been produced illustrating the groundedness and density of the codes to arise from marking up the staff and student qualitative comments in Atlas.ti™ software.

Examining the network map (Appendix 1) we can see *cheating* as a code (in the centre) was the most prominent theme with a groundedness of 287 (occurrence in the 30,000-odd words) and a density (connection to other codes) of 13. *Student* (far right) not surprisingly was the next most popular code with a groundedness of 276 but a higher density of 18. *Solutions* (top middle) had a groundedness of 221 and a density of 7 reflecting the concerns of both staff and students to combat academic dishonesty and suggestions for how to go about this. Interestingly *plagiarism* as a code/theme is less 'grounded' in the commentary with a groundedness/occurrence of 127, substantially less than the overarching vice of *cheating*. Also worthy of note are some of the reasons to arise out of the literature for engaging in either cheating or plagiarism more specifically; these include *ignorance* about what constitutes cheating (61, 1), availability of *essay mills* (7, 1), *parental pressure* to succeed (6, 1), *time limits* on studies (32, 1), *financial pressure* to complete on time (17, 3), *fear* (20, 1) of *failure* (21, 2) and the perceived *triviality* (20, 1) of plagiarism. What was also interesting to arise out of the qualitative feedback was the level of concern over cheating connected with *examinations* (106, 2) and perceived problems in exam *invigilation* (21, 1). A major issue of *concern* (203, 2) to students was that of *identifying people* (66, 3) who cheat, students feeling this was really a responsibility for *staff* (113, 5) to deal with. Reasons for staff not being able to identify cheaters/plagiarisers were *lack of evidence* (3, 3) leading to them *ignoring* (29, 1) the issue, at times because the evidence arrived *too late* (1, 1).

3 STUDY 2: USING THE INTERNET TO FIGHT PLAGIARISM

It has long been our belief that the majority of students although they are aware of the notion of plagiarism, are not well informed on what is really meant by Academic Honesty and often are not even aware that they have committed plagiarism. This belief was confirmed in Study One in which *ignorance* about what constitutes cheating (61, 1) was identified as the main reason for engaging in plagiarism. It seems that adequate training about plagiarism has not been included in every student's education. We believe this happens due to 1) a lack of resources (Study One revealed that *lack of time* was a factor identified by academics as a reason why plagiarism is ignored), 2) no obvious unit in the student's program to conduct such training and 3) potential reluctance of some academics to teach generic skills as they believe students should arrive at university with these skills (Barrie, 2007).

To address the ignorance issue, Study Two aims to determine the value of an online tool that would provide students with information on correct academic behaviour. Falling under the *Design Science* approaches mentioned above, we employed a *design-based research* (DBR) methodology (Reeves et al., 2005) which involves a flexible, iterative process to produce the online tool. DBR is a methodology commonly employed in the learning sciences. Briefly, DBR conducts studies in real world contexts such as classroom environments that test an innovative theory or research based educational design, and that in turn iteratively refines the design of the innovation and the learning environment over time (Brown, 1992; Collin et al., 2004). Building on the literature, our prior study and a range of online resources, our educational design involved self-learning via interactive activities and feedback to both raise and assess student awareness of issues concerning plagiarism. Students would use the tool to learn about plagiarism, its types and levels and view examples and explanations of cases of plagiarism. Finally we would determine how valuable they found the tool. To achieve this we had to first determine the software requirements, design, implement and test the system. We did this in the second half of 2009. The prototype and a usability study are presented in sections 4.1 and 4.2, respectively. The usefulness of the tool is the focus on section 4.3.

3.1 Requirements and Design

Schiller (2005) identifies two forms of plagiarism; the first is word-for-word copying without the use of quotation marks, footnote, citation or acknowledgement of the source in the reference list. The second form is associated with paraphrasing of material without acknowledging the original source. However, as stated in the *Macquarie Academic Honesty Policy* (2009), academic dishonesty can have many forms such as deception, sabotage or fabrication with the most common one defined as plagiarism. In our prototype online system we identify a number of categories of plagiarism based on Walker's (1998) continuum of plagiarism: sham paraphrasing; illicit paraphrasing; other plagiarism; verbatim copying; self-plagiarism or recycling; ghostwriting; and purloining. We also specifically discuss the topic "Is working together plagiarism?"

As part of gathering requirements we investigated existing plagiarism tools. Two noteworthy systems are *You Quote It, You Note It*² and *iResearch*³. The Vaughan Memorial Library, Acadia University website offers an online tutorial application about plagiarism named *You Quote it, you Note it*; this application includes an interactive interface where users choose a player and are requested to answer a series of questions about plagiarism and correct referencing. The questions are mostly associated with choosing which of the given examples are considered plagiarism. Such an application provides a high level of interactivity to users that is maintained through its ease of use. The University of Sydney website includes a tool titled *iResearch: Information Skills for life*.⁴ *iResearch* offers students information about plagiarism and academic honesty as well as referencing and citation techniques. What is interesting about this tool is that it offers students the opportunity for more interactive capabilities; the content is not only textual but includes interactive quizzes with flash games for a richer user experience; online presentations on related material and interactive tools to help students test their knowledge and improve their referencing skills through practice.

There are numerous tools offered that provide functionalities for detecting plagiarism in written documents. Universities often use such tools in order to identify if the submitted work can be characterised as plagiarised. The most well-known tool for plagiarism detection is known as *Turnitin.com*, an Internet-based tool offering capabilities for easy search and identification of plagiarised text. One interpretation of this tool is that it "is a service deeply invested in the discourse of plagiarism" and "poses as an antidote to what some have characterized as the growing 'epidemic' of Internet plagiarism" (Marsh, 2004, p. 48). Another well-known tool in this area is *EssayRater*, a writing support tool that proofreads text and detects plagiarism, spelling errors and punctuation mistakes. We can view these latter examples as strategies to encourage honesty, versus strategies to discourage dishonesty/plagiarism.

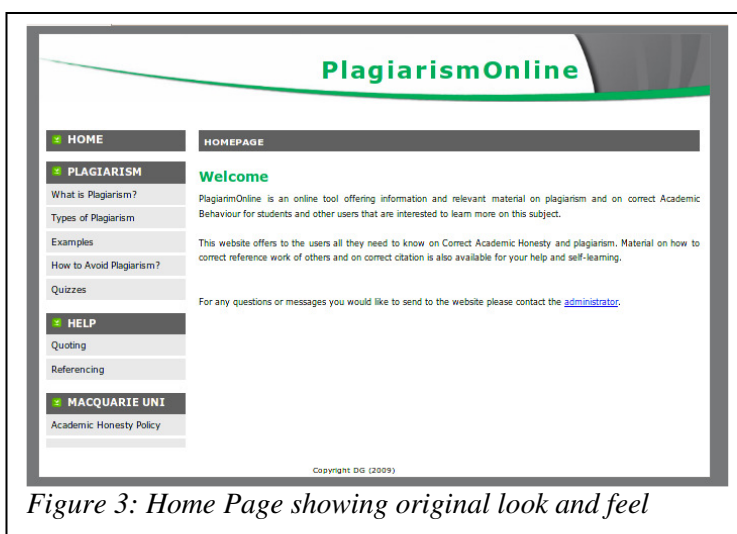
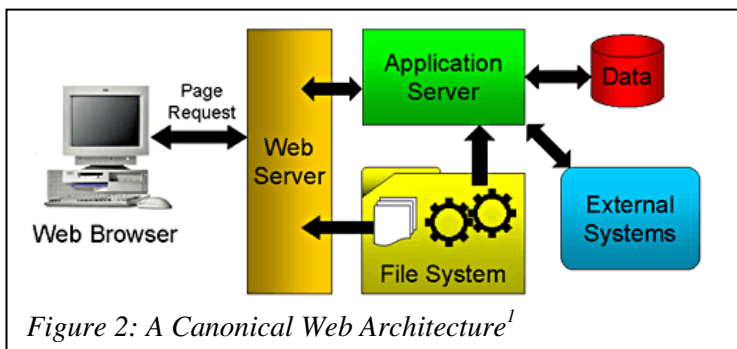
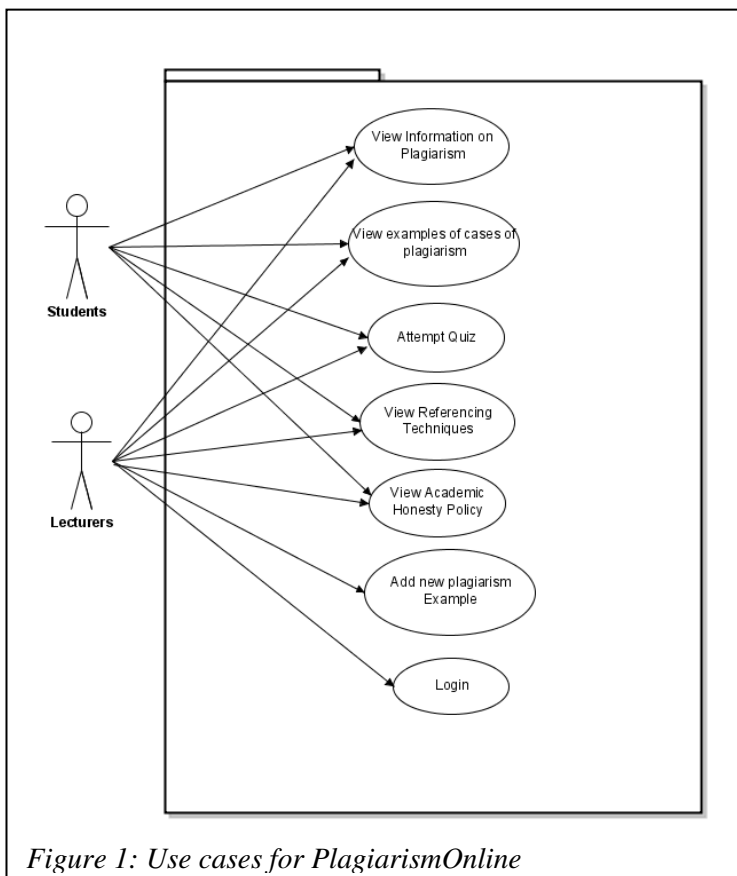
While many departments and individual academics use plagiarism detection software,⁵ from our engagement with students on this topic they are often ignorant of forms of plagiarism, the notion of academic honesty and the penalties associated with different types of cheating and associated severity levels. As such we sought to build a tool that focused on prevention by educating students on the nature, avoidance and consequences of plagiarism so that it is prevented in the first place. We can see in Figure 1, that the key functionalities of our system was to provide to students information of plagiarism, the university honesty policy which also includes how dishonesty is assessed and punished, guidance on appropriate referencing, examples of plagiarism and the chance to test their knowledge via a quiz. For lecturers we wanted them to have access to all that the students had access to, but via authorised login they could add their own unit and case specific examples of plagiarism.

² <http://library.acadiau.ca/tutorials/plagiarism/> (accessed 28/2/11)

³ <http://www.library.usyd.edu.au/elearning/credits.php> (accessed 28/2/11).

⁴ <http://www.library.usyd.edu.au/elearning/index.html> (accessed 2/3/11).

⁵ Our department developed a system called *Submit!* (Pisan et al., 2003) to detect program code plagiarism.



For the development of this project the common Web Architecture (Figure 2) was implemented using a three-tiered Boundary Control Entity (BCE) architecture. A division was made between the front end, which is what the user sees, and the back end that handles all the required processes and generates all the pages. For the development of *plagiarism-Online*, VB.NET was used as the main programming language along with HTML for page display and CSS for the layout design. Microsoft Visual Studio 2008 was used as the development platform. A screenshot of the home page is shown in Figure 3.

3.2 Usability Pilot Testing

In order to ensure that *plagiarism Online* would be a helpful and usable tool for students, a small-scale usability testing study was conducted with a group of postgraduate Macquarie University students. Students enrolled in a Master of IT degree were asked via email to visit *plagiarismOnline*, test its functionalities and answer a questionnaire including questions on ease of use, overall attractiveness of the website and content consistency across all the material posted on the website.

The questionnaire was divided into three parts; a) personal information, b) overall rating of the website and c) comments and suggested new features. In the first part, students were asked to provide some general information about their gender and age so as to have a better understanding of the comments amongst different age groups and genders. In the second part students were asked to rate the website according to some specific questions in a scale from 1 to 5 where 1 was associated with strongly disagree and 5 with strongly agree. The questions covered all the aspects of *plagiarismOnline* including rating of

Sections	Average Rating
Overall Rating of the Website	
Homepage is clear	4.5
What is plagiarism page is clear	4.88
Types of plagiarism page is clear	4.75
How to avoid plagiarism page is clear	4.63
Procedures and Policies page is clear	4
Using sources page is clear	4.38
Referencing page is clear	4.75
Academic Honesty Policy page is clear	4.5
Examples of Academic Dishonesty page is clear	4.25
Web Page Rating	
Ease of use	4.38
Sequence of pages is clear	4.25
Able to read text on each page	3.88
Choice of colours is appropriate	3.75
The overall site is attractive	4
Terminology and Website Information	
Use of terms is consistent	4.38
Position of messages on screen is consistent	4.5
Purpose of the website is clear	4.88
Screens have the right amount of information	4
General Comments	
I found the tool useful for understanding plagiarism	4.25
I learnt something about plagiarism I did not know	4.25
I found the quiz helpful to test out the knowledge	4.13
I think the tool would be useful for computing students	4.5

Table 1: Average Rating for each question

layout, colours, content information, ease of use and others. In the last part, students were asked to add any comments and feedback from their experience and also add any new features or functions that they would like to see on the *plagiarismOnline* website in the future. After the completion of the usability testing survey all the questionnaires were gathered and analysed in order to extract the desired results.

The survey was completed by 8 respondents (5 males and 3 females aged 23 to 29). The average ratings out of 5 were: overall website 4.3; web page 4.05; terminology and website information 4.44; general comment 4.28 and total 4.32. Table 1 presents the average rating for each question by section.

The overall feedback given by the respondents of this survey was quite positive. Most of the comments mentioned that more examples could be added to all the pages for easier understanding of the content, such as examples of all the particular types of plagiarism and academic dishonesty. In the section about what other features should be added to *plagiarismOnline*, the majority of respondents answered that they would like to see a tool for detecting plagiarism. Although they found the website useful for reading information on plagiarism, they would have liked the option for checking their work for plagiarism.

3.3 Usefulness Testing with first year Business Information Systems students

Looking to the longer term usage of the system we wanted a better solution to support maintenance of the site content and management of data. We transported the system to the *GetSimple* content management system; this site was introduced to 220 first year Business Information Systems students as a learning module to make them aware of the issues around academic honesty and to get them off to the right start at university. To encourage students to do the module, it was made a learning activity in Week 10 (semesters have 13 weeks of lectures), as part of their practical exercises. The module was introduced in lectures to draw to the students' attention the importance of academic honesty at Macquarie University and the severity of the penalties that may apply. Two cartoons on YouTube™ about plagiarism created by Rutgers University were presented in the lecture to make the topic more interesting as nobody likes to *only hear* about plagiarism or the honesty policy, and to help them see that the issue is a part of academic life beyond the lecture halls at Macquarie. As part of their weekly practical session, students were directed to read through each of the content pages in their own time in

the week that followed and then complete the online quiz and finally the online survey about their experience. The content, quiz and survey were part of the same system. The survey questions were as follows:

- 1 Before using Plagiarism Online, I already had a good understanding of Macquarie's honesty policy
- 2 Before using Plagiarism Online, I already had a good understanding of what plagiarism can be
- 3 I was surprised by some of the definitions of plagiarism
- 4 I was surprised by some of the examples of plagiarism
- 5 As a result of using Plagiarism Online, I plan to change the way I use and cite the work of other people.
- 6 I still don't think I properly understand plagiarism, its forms or how to be sure that I have complied with the honesty policy

Students received half a percent (in place of the mark allocated for tutorial question submission) for completing the quiz, regardless of the mark they achieved, to remove any incentive for cheating or colluding to get all questions correct. They were allowed to do the quiz as many times as they wanted but their first attempt was the score we captured.

3.3.1 Results

The quiz was completed by 141 students. There were a total of 14 questions. Other than a couple of outliers, the distribution of results formed a bell curve as shown in Figure 4 with a median and mode of 11, mean score was 10.78 with standard deviation of 1.868, a maximum of 14 and minimum of 3.

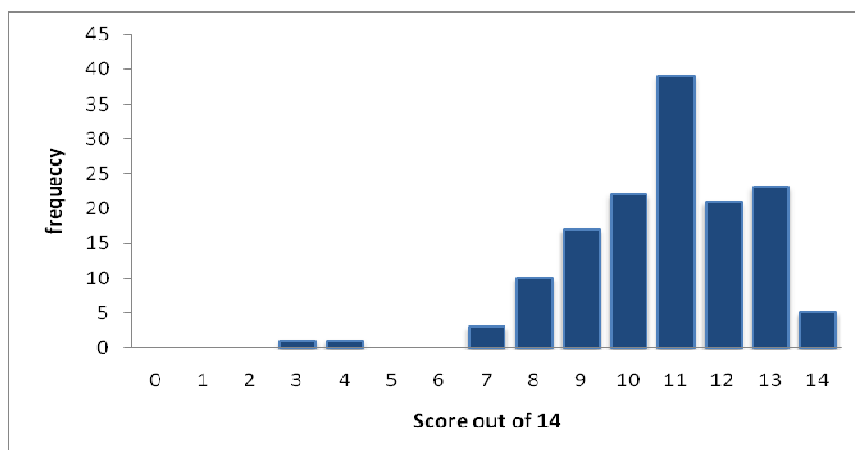
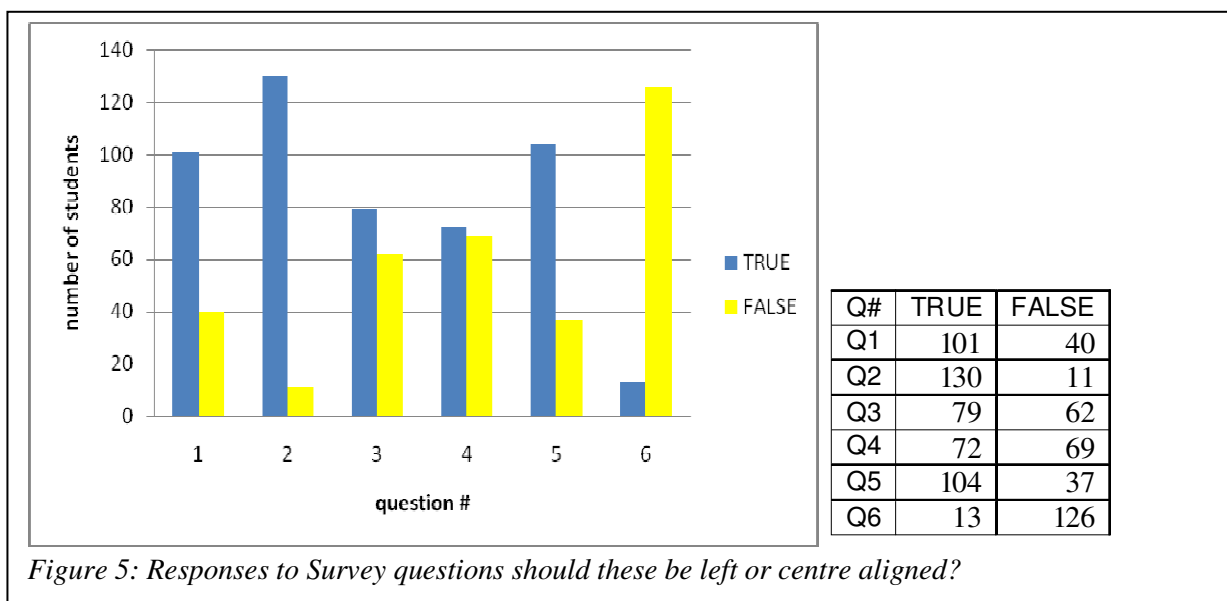
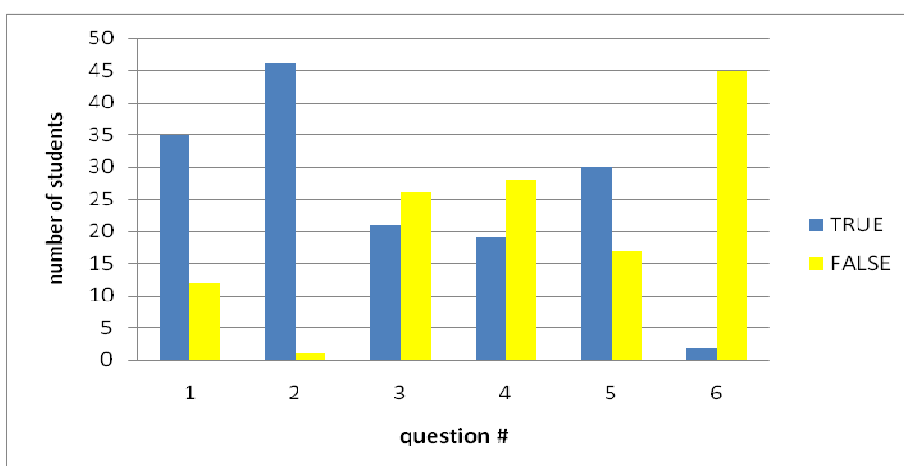


Figure 4: Number of participants by quiz score

Our main interest was in the usefulness of the system for educating students about plagiarism. Figure 5 shows a graph and table of the distribution of answers to the survey questions. We see that while students believe they already knew most of the content before (Q1 and Q2), nevertheless at the end, 126/139 students felt they had a good understanding of plagiarism and the honesty policy after using the site and this percentage is greater than the 101/141 students who started off with a good understanding of the university policy. Notably, despite the students confidence in their prior understanding, more than half found some definitions (Q3) and examples (Q4) surprising and 104/141 expect to change the way they reference and use other people's work (Q5). Even if we are unable to confirm that the students have changed their understanding and behaviours, their admission of surprise and intention to change their behaviour are major outcomes particularly since they considered themselves already knowledgeable.



To determine if students' perceptions about the value of the system were related to how well they scored in the quiz, the survey answers for students with higher scores in the quiz (≥ 12) were separated and compared. As can be seen in Figure 6, the shape of the column graph basically matches that of the graph of all the survey answers for all students, the only difference being that more students answered false rather than true on questions 3 (surprised by some types of plagiarism) and 4 (surprised by some examples).



Prior to the study from our experience with students, we believed that students often do not recognise plagiarism and all of its forms. Question 3 sought to ascertain if students found the plagiarism definitions surprising. A z-test was done comparing the quiz scores of students who answered true to the scores of students who answered false to question 3 and no statistical significance was found, although slightly more students who answered false to question 3 scored 12 and 13, and more students who answered true scored 8 to 10.

4 CONCLUSIONS AND FUTURE DIRECTIONS

Study One revealed that even with the growing use of the more positive term “academic honesty” there remains substantial negativity, with *cheating* being the strongest theme requiring the need for *solutions* to *plagiarism*. For some students, constraints such as *time limits*, *family* and *financial pressure* meant that *fear of failure* outweighed consequences of which they were largely in *ignorance*. For others, *ignorance* was both the cause and result of an attitude which saw academic honesty as a *trivial* matter. For academics, there was much concern over *examinations* and *identifying people*. A solution which reduces the incidence of plagiarism, would reduce the level of academic concern. Study Two showed that an online tool about academic honesty could inform students and potentially change their intentions and behaviour which would result in an overall reduction in dishonest conduct.

Universities and institutions around the world are becoming increasingly concerned about plagiarism and are realising the importance of taking appropriate measures to cope with this situation. Brown, McDowell and Duggan (2003) suggest four strategies to combat cheating and plagiarism, that is: 1) use of strict controls, 2) making the rules clear and having known penalties, 3) designing assessment instruments that make cheating difficult and 4) developing a climate that will reduce the likelihood of cheating. Study One which sought to understand attitudes to and reasons for plagiarism endeavours to understand the climate towards changing that climate (strategy 4). The eLearning *PlagiarismOnline* tool developed and evaluated in Study Two seeks to change these attitudes and the culture by addressing the problem of ignorance about plagiarism and its forms and by making the rules and penalties clear (strategy 2). Stemming from our desire to ‘nip plagiarism in the bud’, it is our intention that the tool be a compulsory part of the first year experience for all students. As described above in study two, formative assessment was undertaken using the online quiz after studying the material. Not mentioned above, we also conducted summative assessment by including a question relating to the content in the plagiarism module in the final exam. There is ongoing effort required by academics to use strict controls (strategy 1) and to design assessment instruments that make cheating difficult (strategy 3). We note the time requirements behind these efforts and recommend that university-wide strategies and resources, not just policies, be created to support teachers in this task.

As a publically available online resource, *plagiarismOnline* could be a reference for students to consult throughout their enrolment to ensure they are correctly using and citing the work of others. To enhance the system further, questionnaires and guidance tests could be included which provide advice on whether their work could be considered by academics to be a case of plagiarism. As part of future work for *plagiarismOnline*, we could investigate the inclusion of a feature for detecting plagiarism and giving feedback to students about the plagiarised parts. From the usability testing conducted, students were positive about such an idea and they suggested that they would use such a feature for testing their work before submitting any coursework. Another suggestion from the usability study was the inclusion of a more advanced content management feature that would allow lecturers and administration not only to add new examples of cases of plagiarism but also add new pages with information on related material. In this way this tool could be transformed to a community website where lecturers and students could communicate and exchange opinions and feedback on this area. In line with this suggestion, the original system was migrated into a content management system before we conducted Study Two to support such future usage. This new version of *plagiarismOnline* includes authorised access to allow updates. In the future we hope more academics will take advantage of the opportunity to create a personalised account, add content such as further quizzes and games and engage in forums and online chat rooms to exchange ideas and experiences. This proactive action to educate students, take action against plagiarism and promote academic honesty is aimed at changing the institutional culture, which after all is where long terms gains will be made.

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Appendix A: Grounded Theory map of the Plagiarism hermeneutic unit

